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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,606	06/23/2003	Christopher Dube	DR-352J	8958

7590 09/10/2010  
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EXAMINER
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FOX, JOHN C

ART UNIT	PAPER NUMBER
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3753

MAIL DATE	DELIVERY MODE
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09/10/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/601,606	<b>Applicant(s)</b> DUBE ET AL.	
	<b>Examiner</b> John Fox	<b>Art Unit</b> 3753	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-45 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 and 14-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 11, 2010 has been entered.

Claim 2 has been cancelled.

Claims 9-12, 14-45 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3-4, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Barth et al.

It is believed that the general pertinence of the reference is readily apparent. Barth et al manifold 114 includes Kapton sheet 116 and adhesive layers 126, 130, fluid channel 140, and electric leads 164, 166 for connection to the ejection means 110, either of which can be read as an electronic control system. The Barth et al manifold 114 includes a length extending from hole 134 to chamber 148.

Applicant's arguments filed June 11, 2010 have been fully considered but they are not persuasive.

The Examiner appreciates Applicant's clarification of what "an entire length" means. Since claim 1 has been amended to change "the microfluidic system extending ..." to "a plurality of channels extending..." the interpretation of the claim language will perforce change.

Applicant argues that the claim recitation of "a support platform having a length" should be interpreted as corresponding to the extent of channels 49, 51, and 53 as shown in the drawings. However, that is not what the claim says.

Any two dimensional body can be described as having many different lengths. A fence post has a length from one end to the other and two lengths from one end to the middle, for example. A yardstick has 36 sequential lengths of one inch each. A baseball field has a length from the pitcher's mound to home plate, a length from third base to the left field pole, a length from second base to the door to the visiting team's bull pen, etc. An ant that walks from inch 3 to inch 4 of the yardstick travels the entire length of that inch. Almost every pitch in a ball game extends the entire length from the pitcher's mound to home plate.

Similarly, channel 140 of Barth et al, together with the lateral connections thereto, comprise "a plurality of channels extending the entire length of the support platform" where the length is defined in the claim as being any length of the platform, and the actual language of the claim is met as set forth in the rejection. Accordingly, the rejection is still seen to be proper and will be maintained.

Claims 1, 3-8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barth et al in view of Biegelsen et al.

Barth et al show the claimed device except for some details. Biegelsen et al show a microvalve with electric connections formed on the lamination for controlling the valve, and broadly disclose multiple embedded fluidic components and the use of known circuit board manufacturing techniques for MEMS devices. It would have been obvious for one of ordinary skill in the art at the time the invention was made to have used such electric connections formed on the lamination layers as taught by Biegelsen et al with the system of Barth et al under the rationale set forth in *KSR v. Teleflex*, 550 U.S. \_\_\_, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007) that the simple substitution of one known element for another to obtain predictable results is obvious.

The use of a commercially available resin, R/FLEX, is considered an obvious matter of choice, as is the deposition depth. The recitation of “etched” in claim 7 relates to a method of manufacture and is not given weight in the apparatus claim. As to claim 8, the step of not bonding areas that are not supposed to be bonded is considered an obvious expedient.

Applicant’s arguments are limited to Barth et al, which arguments have been answered. Therefore this rejection will be maintained.

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued

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examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fox whose telephone number is 571-272-4912. The examiner can normally be reached on Monday-Saturday from 10am-6pm (Hoteling Program).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hepperle can be reached on 571-272-4913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Fox/  
Primary Examiner  
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